

OBJECTIVES: In July 2000, Florida replaced a Federal law mandating all motorcycle riders to wear helmets with a state law requiring helmets only for those <21 years, or with under \$10,000 health insurance. Hospitalizations for motorcycle accident-related injuries prior to and after the law changed were examined to understand potential consequences. **METHODS:** Florida hospital databases for 13 quarters prior to January 4, 1997–June 30, 2000) and after the change July 1, 2000–September 30, 2003), and published Florida motorcycle crash statistics were examined. Hospitalized cases with crash-related injuries were identified by via Emergency Department, ICD-9 diagnosis and E codes (E810.2-E825.2, E810.3-E825.3). Injury type, demographics, costs, length of stay (LOS) and disposition were analyzed. Charges (accommodations and ancillary services) adjusted by a 0.46 cost-to-charge ratio and appropriate inflation indices are reported as costs (2005 US\$). **RESULTS:** In the pre-repeal period, 3914 inpatient motorcycle-related injury cases were identified (males: 86%; mean age: 35.6, mean LOS: 6 days); 6424 cases in post-repeal period (males: 87%, mean age: 36.4, mean LOS: 6 days); due to a rise in reported motorcycle crashes (33%), all related-injuries (44%) and deaths (66%) during 1997–2003; however, broader E-code use may also be a factor. Among hospitalized cases, there were significantly ($p < 0.01$) more head, neck and cervical spinal cord injuries (45% vs 35%), and deaths (2.9% vs. 2.2%) post-repeal. Although average LOS did not increase, average cost per day (\$4093 vs. \$3359), and per stay (\$20,502 vs. \$17,243) increased significantly ($p < 0.01$) post-repeal. Cumulative cost of inpatient care for motorcycle-related injuries rose from \$68 million to \$132 million during this period. **CONCLUSIONS:** Since universal helmet requirements were relaxed, there has been a substantial increase in motorcycle accident-related injuries overall, head injury hospitalizations, and injury-related deaths. Beyond clinical and societal consequences, these increases reflect an increased economic burden as well.

PAIN—Clinical Outcomes Studies

PPN1

OPIOID ASSOCIATED ERECTILE DYSFUNCTION IN CHRONIC PAIN PATIENTS

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OBJECTIVES: To study the prevalence of erectile disorder in males with chronic pain on opioids. Chronic pain can lead to reduced quality of life and strain on relationships. Opioids themselves can lead to significant side effects, including a reduction in serum testosterone and interference in the hypothalamic—pituitary-axis. **METHODS:** Male patients in an opioid clinic with chronic pain on opioids were screened for erectile disorder. **RESULTS:** Ninety five patients were screened and 27 patients (29%) were positive for the disorder. Only ten (37%) had received treatment. **CONCLUSIONS:** Erectile disorder is an under diagnosed and treated disorder in chronic pain patients on opioids. Male patients with chronic pain should be routinely screened for erectile disorders.

PAIN—Cost Studies

PPN2

IMPACT OF BACK PAIN ON ABSENTEEISM, PRODUCTIVITY LOSS, AND DIRECT HEALTH CARE COSTS USING THE MEDICAL EXPENDITURE PANEL SURVEY (MEPS)

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OBJECTIVE: The objective of this study was to assess the impact of back pain on absenteeism, productivity loss, and direct health care costs using the Medical Expenditure Panel Survey (MEPS). **METHODS:** Individuals between the ages of 18 and 65 years who participated in the MEPS during 2000 were included in the study. Back pain patients were identified using ICD-9 codes. The predictors of absenteeism in individuals who experienced back pain were identified using Zero-inflated negative binomial regression (ZINB). Absenteeism days due to back pain were estimated based on the ZINB regression model. Productivity loss was estimated using the human capital approach. **RESULTS:** In 2000, the one-year period prevalence of back pain in individuals between 18 and 65 years of age was 11.1%. About 16.3% of the individuals who were employed and who reported back pain experienced back pain due to work-related injuries. Ethnicity and union contract were identified as significant predictors of likelihood of absenteeism in individuals who experienced back pain. The significant predictors of absenteeism rate were perceived overall health status due to back pain, and ethnicity. The mean number of absenteeism days due to back pain was estimated to be six days and a total of nine million absenteeism days were due to back pain. The total productivity loss due to back pain-related absenteeism was estimated to be \$3.6 billion and the total direct health care costs was estimated to be \$14 billion. The average productivity loss due to back pain was estimated to be \$305 per person and the annual per-capita direct health care cost due to back pain was \$730. **CONCLUSIONS:** Back pain is one of the most common and challenging problems in primary care. The economic burden due to back pain is of concern to employers, insurance agencies, policy decision makers and treatment decision makers.

PAIN—Health Care Use & Policy

PPN3

THE PRICING AND DISTRIBUTION OF REPACKAGED DRUGS: COST EFFECTS IN THE CALIFORNIA WORKERS' COMPENSATION SYSTEM

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OBJECTIVE: The California Workers' Compensation (WC) drug pricing system effective in 2004 tied payments to the Medi-Cal system, but 60% of National Drug Codes (NDC) in the WC System lacked an equivalent Medi-Cal NDC; and many were repackaged pharmaceuticals. A model of pharmaceutical distribution and claims processing of repackaged pharmaceuticals was defined. We assessed the cost and utilization of repackaged pharmaceuticals to determine potential lost savings to the California WC system. **METHODS:** We used 2002 data from the California Workers' Compensation Institute and Medi-Cal pharmacy expenditures. We described the extent of lost savings due to repackaged pharmaceuticals, compared the characteristics of repackaged pharmaceuticals in the WC using ANOVA, and identified predictors of repackaged pharmaceuticals using GLM regression. We also suggest alternative pricing systems for Medi-Cal non-equivalent repackaged NDCs. **RESULTS:** Repackaged pharmaceuticals represented 55% of the Medi-Cal non-equivalent NDCs used, but only 21% of total WC costs (\$8,494,297) were attributed to repackaged pharmaceuticals. Approximately 88% of repackaged pharmaceutical costs were for generic medications. Companies most commonly associated with repackaged pharmaceutical costs were Southwood Pharmaceuticals (33.1%) and Pharma Pac (31.7%). Overall, com-